

IN THE CLAIMS

Claim 1 (Currently Amended): A sender device for sending an encrypted information signal, the device comprising:

means for generating chaotic signals comprising

a source producing a chaotic signal and provided with a feedback loop comprising means for generating time delay, and a non-linear circuit element,

means for producing the encrypted information signal comprising

a mixer circuit element to inject an information signal to encrypt the information signal, received on one input, into the chaotic signal propagating in the feedback loop, received on another input,

wherein the feedback loop includes means for filter-forming to limit the spectrum of the chaotic signal to one or more spectrum bands to allow the sender to directly transmit the chaotic signal obtained from the feed back loop, and the encrypted information signal enables a receiver device to be automatically self-synchronized.

Claim 2 (Previously Presented): The sender device according to claim 1, wherein said means for filter-forming disposed in the feedback loop present a transfer function which distributes the chaotic signal statistically over a given spectral profile.

Claim 3 (Previously Presented): The sender device according to claim 1, wherein the means for filter-forming disposed in the feedback loop comprise a bandpass filter.

Claim 4 (Previously Presented): The sender device according to claim 3, wherein a passband of said filter covers a spectral band of the information signal to be encrypted, having a bandwidth that is slightly greater than that of said spectral band.

Claim 5 (Previously Presented): A sender device for emitting an encrypted information signal, the device having a plurality of sender modules in cascade, each being constituted by a device according to claim 1.

Claim 6 (Previously Presented): A receiver device for receiving an encrypted information signal, the device comprising means for receiving said signal, and a feedback loop comprising means for delayline-forming and a non-linear circuit element, wherein in order to receive an information signal encrypted by a device according to claim 1, the feedback loop includes means for filter-forming whose characteristics are identical to those of the means for filter-forming in the feedback loop of the sender device.

Claim 7 (Previously Presented): A receiver device for receiving an information signal encrypted by a sender device comprising a plurality of sender modules, each being constituted by a device according to claim 1, the receiver device comprising a plurality of receiver modules in cascade, the number of these modules being the same as the number of modules in the sender device, means for filter-forming in feedback loops of the receiver modules having characteristics that are identical to those of means for filter-forming in a feedback loop of the sender modules.

Claim 8 (Previously Presented): A sender/and or receiver device for an encrypted information signal for transmission by radio over a voice signal carrier, the device including a device according to claim 1.

Claim 9 (Previously Presented): A transmission system for transmitting encrypted information signals, the system comprising a sender device according to claim 1, a complementary receiver device, and a unique transmission channel between said sender device and said receiver device.

Claim 10 (Previously Presented): A radio transmission system for transmitting encrypted information signals, the system comprising a sender device according to claim 1, a complementary receiver device, and a transmission channel between said sender device and said receiver device, said transmission channel including means for analog-to-digital converting and means for digital-to-analog converting respectively downstream and upstream from the sender device and from the receiver device.